



REPLACEMENT SHEET

5/18

(10)

5'  
GCA CCA TTA AAG AAA ATA TCA TCT TTG GTG  
TTT CCT ATG ATG AAT ATA PS  
3' FAM SEQ ID NO: 1

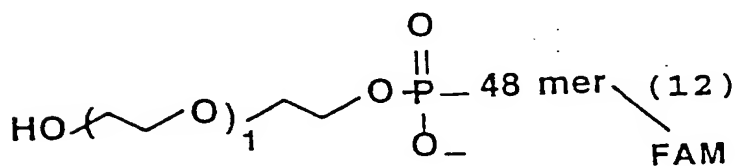
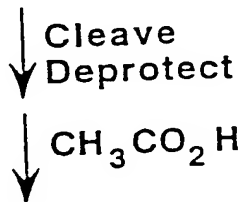
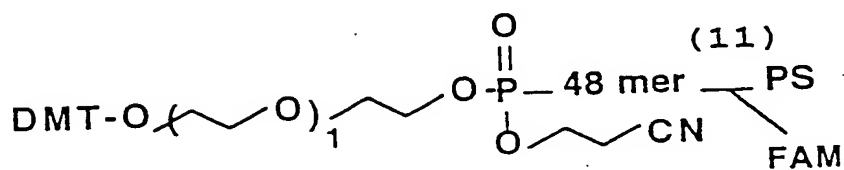
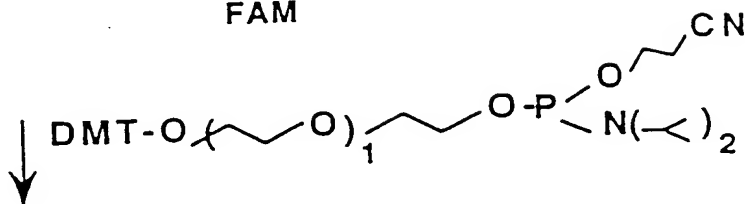


Fig. 4A

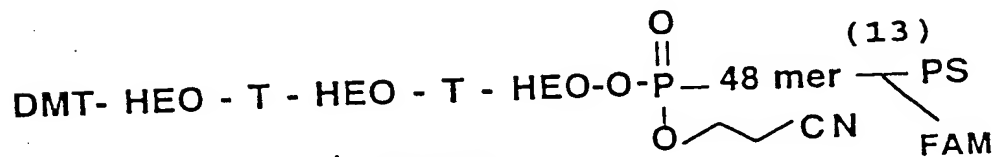
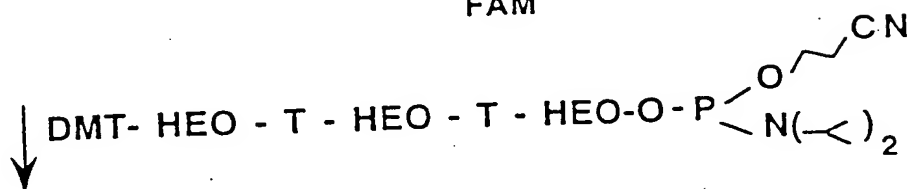


REPLACEMENT SHEET

6/18

(10)

5'  
GCA CCA TTA AAG AAA ATA TCA TCT TTG GTG  
TTT CCT ATG ATG AAT ATA 3' PS  
FAM SEQ ID NO: 1



↓ Cleave,  
Deprotect,  
Purify

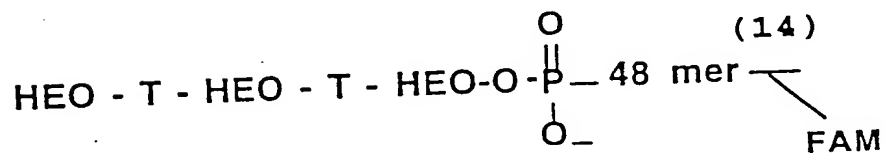
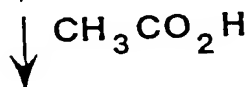


Fig. 4B

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$$\text{DMT-O} \left( \text{CH}_2\text{CH}_2\text{O} \right)_5 \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \diagup \text{OCH}_2\text{CH}_2\text{CN} \\ \diagdown \text{N}(\text{CH}_2\text{CH}_2)_2 \end{matrix}$$
  
 $\downarrow$  N additions
   

$$\text{DMT-O} \left( \text{CH}_2\text{CH}_2\text{O} \right)_5 \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \text{O} \\ \parallel \\ \text{O} \end{matrix} \text{O} \left( \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \text{O} \\ \parallel \\ \text{O} \end{matrix} \text{O} \right)_N \text{24 mer-LAN-T-CPG} \quad (16)$$
  
 $\downarrow$  Cleave, Deprotect
   

$$\text{DMT-O} \left( \text{CH}_2\text{CH}_2\text{O} \right)_5 \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \text{O} \\ \parallel \\ \text{O} \end{matrix} \text{O} \left( \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \text{O} \\ \parallel \\ \text{O} \end{matrix} \text{O} \right)_N \text{24 mer-LAN-T} \quad (17)$$
  
 $\downarrow$  FAM-NHS
   
 $\downarrow$   $\text{CH}_3\text{CO}_2\text{H}$ 
  

$$\text{HO} \left( \text{CH}_2\text{CH}_2\text{O} \right)_5 \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \text{O} \\ \parallel \\ \text{O} \end{matrix} \text{O} \left( \text{CH}_2\text{CH}_2\text{O-P} \begin{matrix} \text{O} \\ \parallel \\ \text{O} \end{matrix} \text{O} \right)_N \text{24 mer-LAN-T} \quad (18)$$
  
 $\text{FAM}$

Fig. 5